Fig. 1

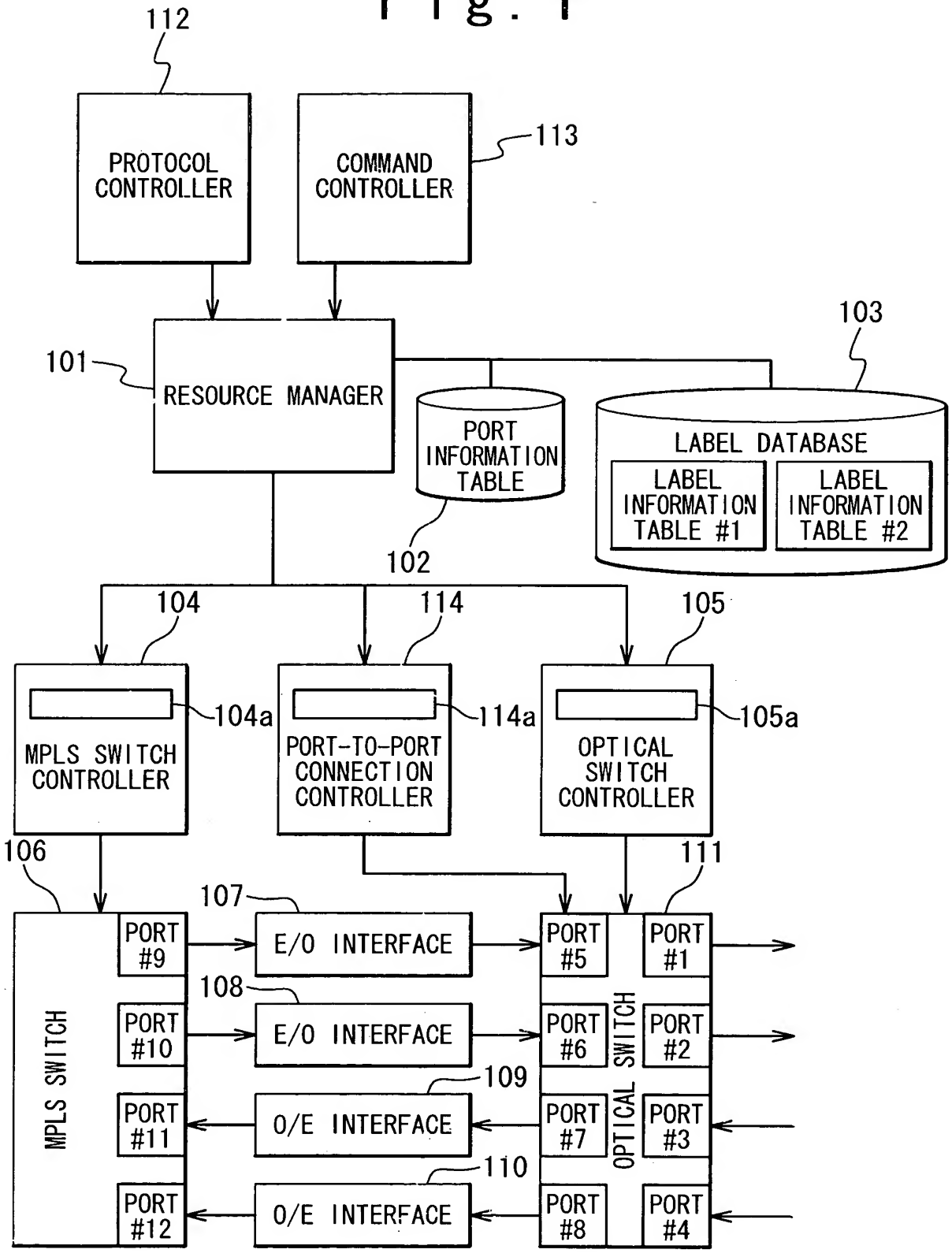
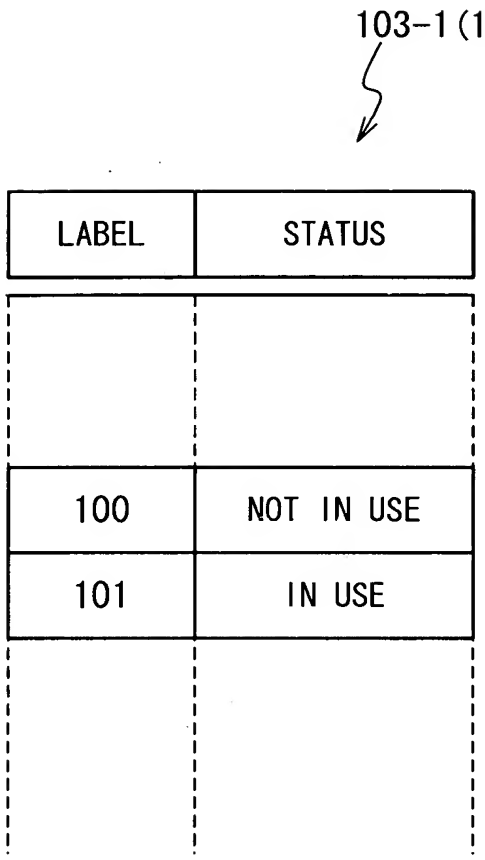

112
PROTOCOL CONTROLLER
COMMAND CONTROLLER
113
101
RESOURCE MANAGER
103
PORT INFORMATION TABLE
102
LABEL DATABASE
LABEL INFORMATION TABLE #1
LABEL INFORMATION TABLE #2
104
114
105
MPLS SWITCH CONTROLLER
104a
PORT-TO-PORT CONNECTION CONTROLLER
114a
OPTICAL SWITCH CONTROLLER
105a
106
111
107
MPLS SWITCH
PORT #9
PORT #10
PORT #11
PORT #12
E/O INTERFACE
108
E/O INTERFACE
109
O/E INTERFACE
110
O/E INTERFACE
OPTICAL SWITCH
PORT #5
PORT #6
PORT #7
PORT #8
PORT #1
PORT #2
PORT #3
PORT #4

Fig. 2



# Fig. 3

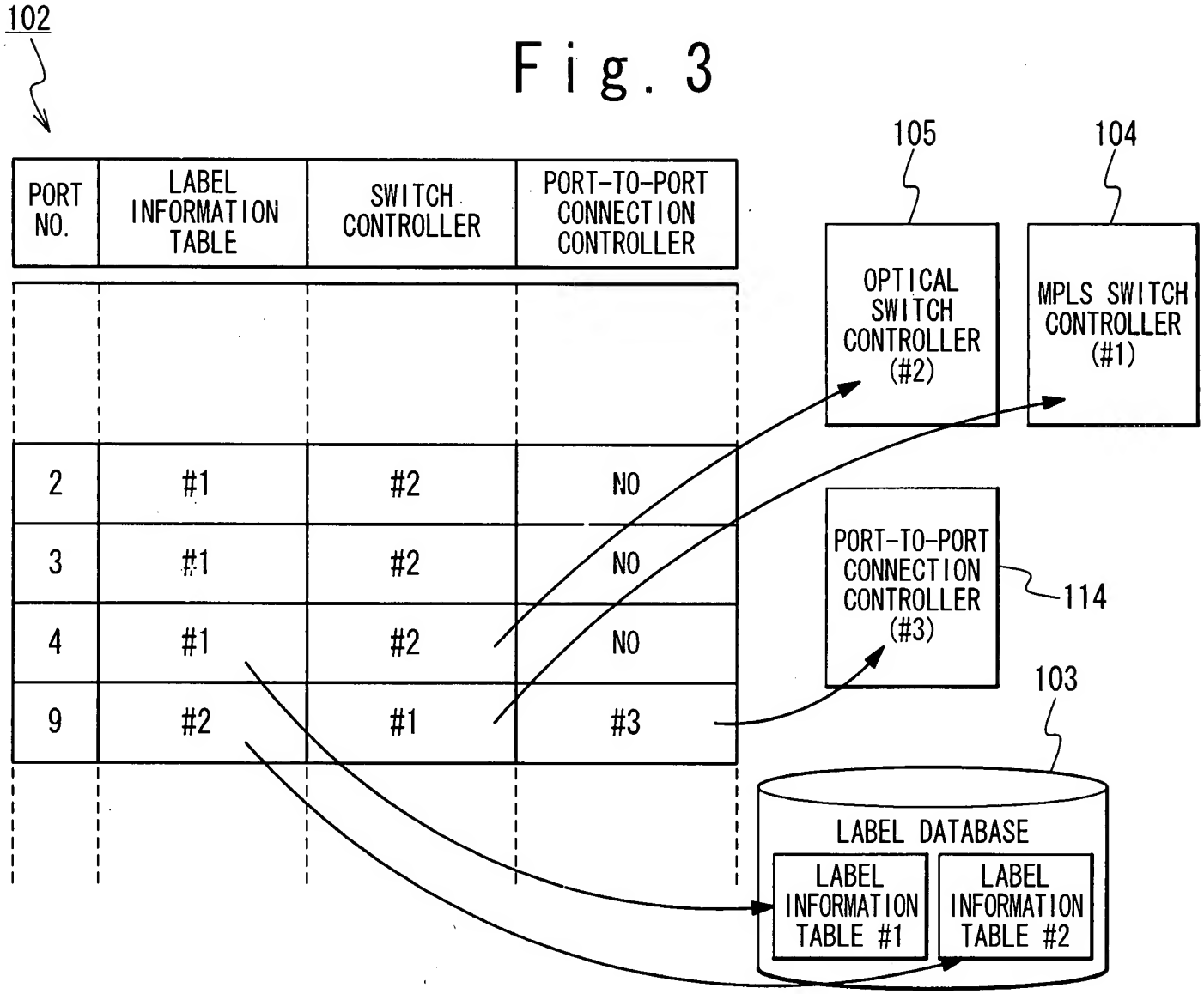

102
PORT NO.
LABEL INFORMATION TABLE
SWITCH CONTROLLER
PORT-TO-PORT CONNECTION CONTROLLER
2
#1
#2
NO
3
#1
#2
NO
4
#1
#2
NO
9
#2
#1
#3
105
OPTICAL SWITCH CONTROLLER (#2)
104
MPLS SWITCH CONTROLLER (#1)
PORT-TO-PORT CONNECTION CONTROLLER (#3)
114
103
LABEL DATABASE
LABEL INFORMATION TABLE #1
LABEL INFORMATION TABLE #2

Fig. 4

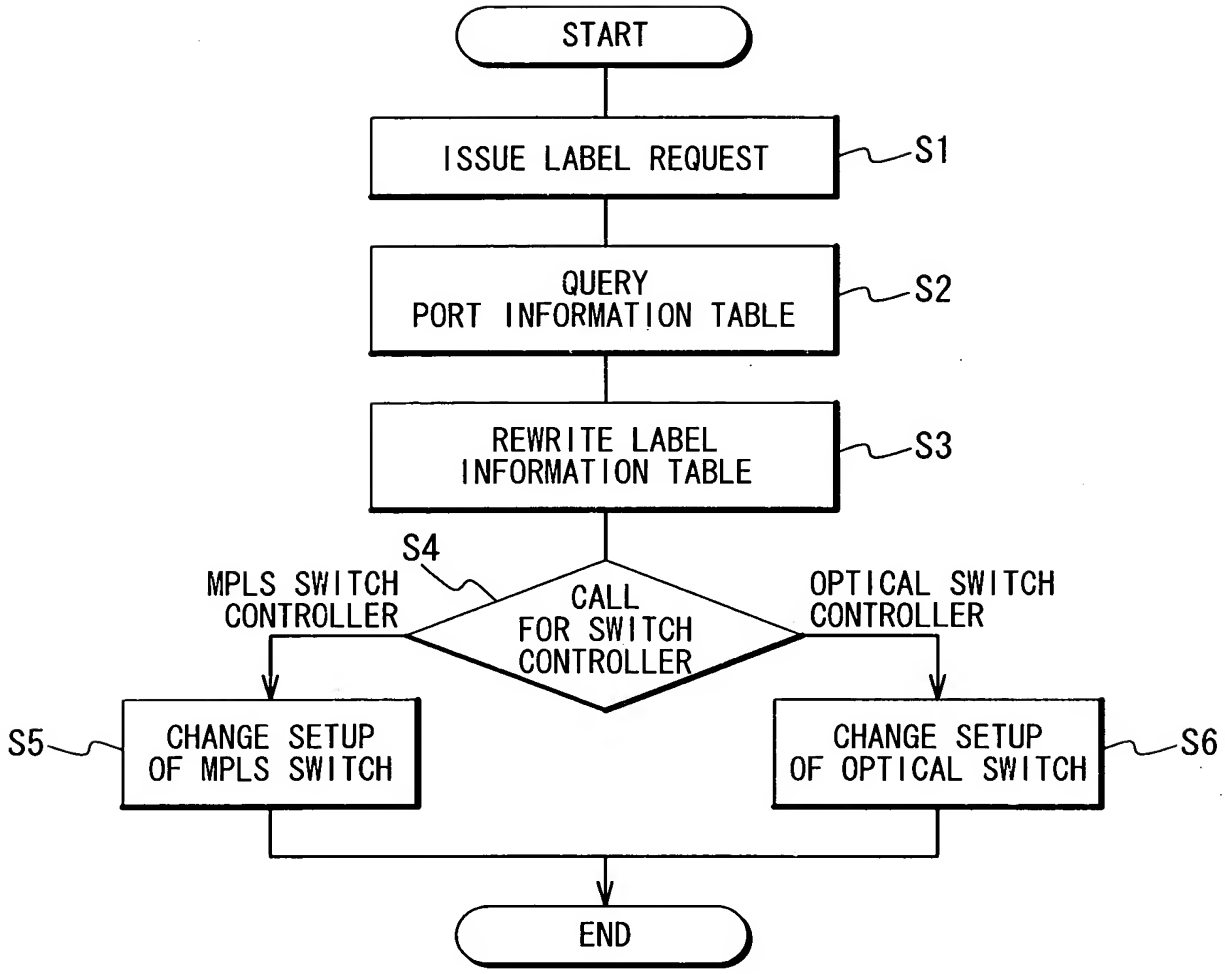

START
ISSUE LABEL REQUEST
S1
QUERY
PORT INFORMATION TABLE
S2
REWRITE LABEL
INFORMATION TABLE
S3
S4
MPLS SWITCH
CONTROLLER
CALL
FOR SWITCH
CONTROLLER
OPTICAL SWITCH
CONTROLLER
S5
CHANGE SETUP
OF MPLS SWITCH
CHANGE SETUP
OF OPTICAL SWITCH
S6
END

Fig. 5

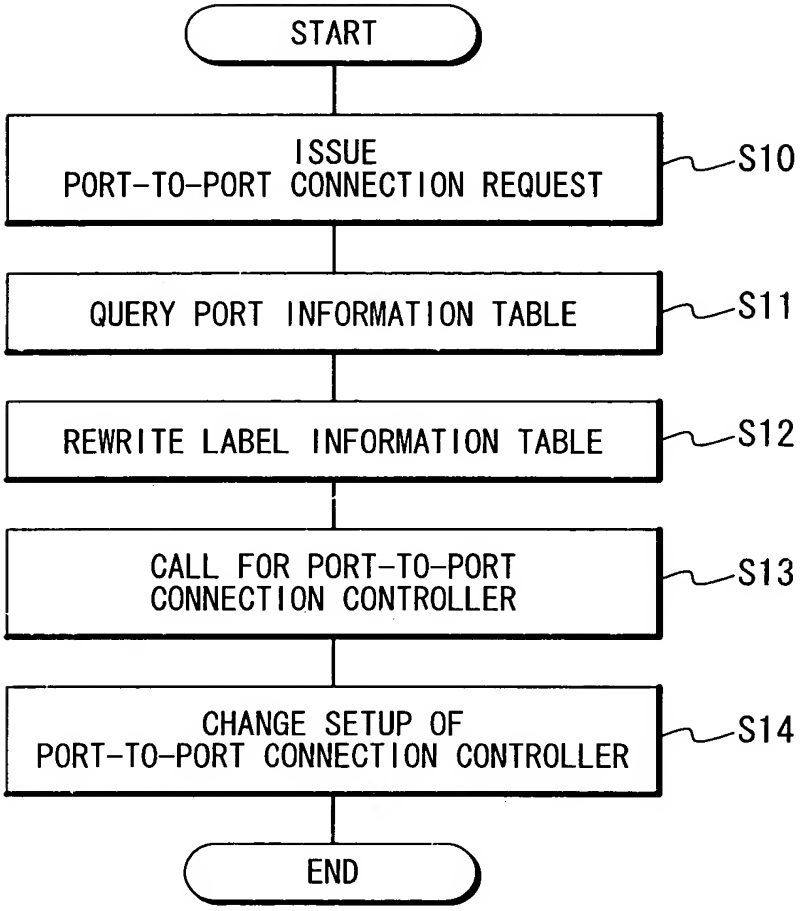
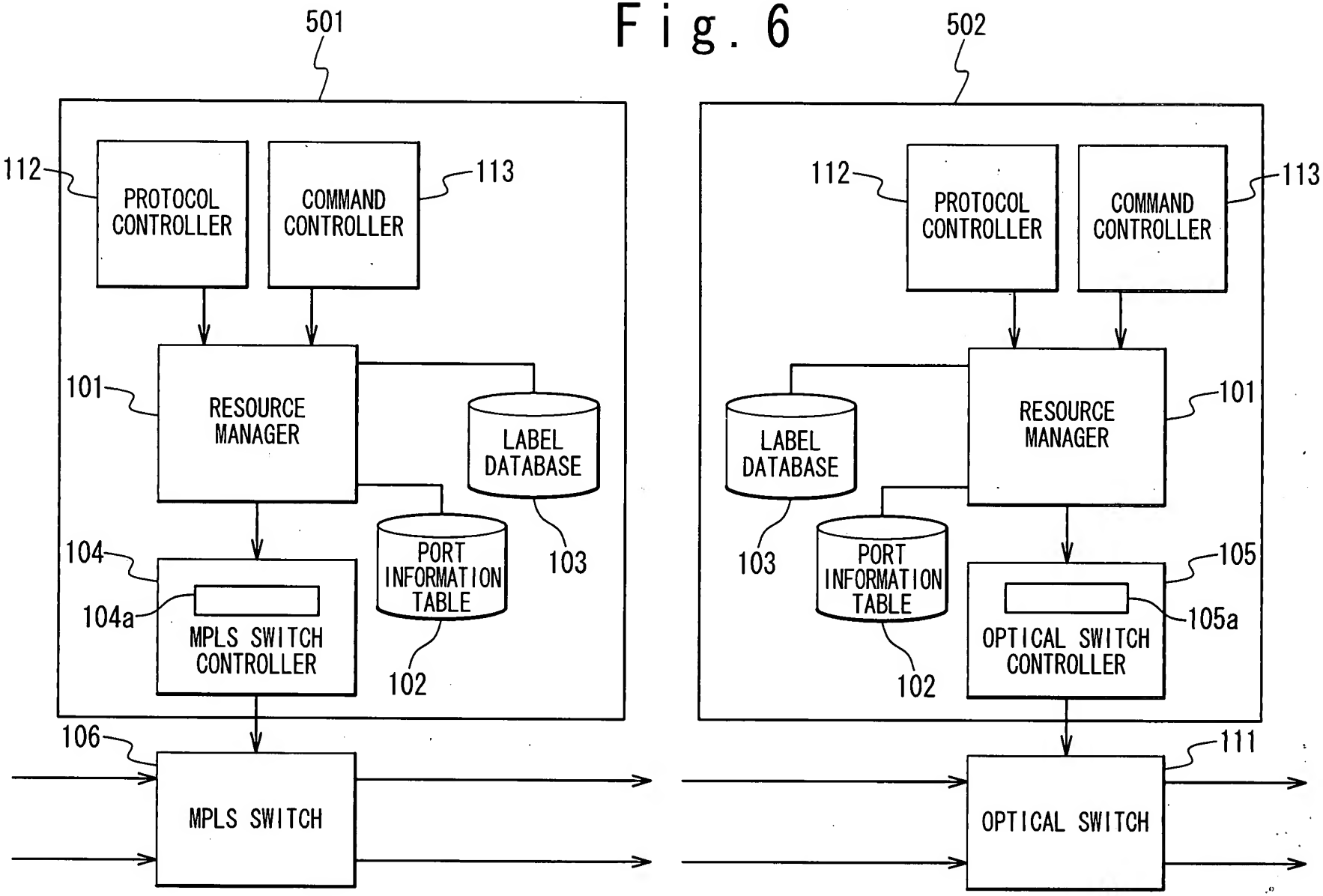

START
ISSUE
PORT-TO-PORT CONNECTION REQUEST
S10
QUERY PORT INFORMATION TABLE
S11
REWRITE LABEL INFORMATION TABLE
S12
CALL FOR PORT-TO-PORT
CONNECTION CONTROLLER
S13
CHANGE SETUP OF
PORT-TO-PORT CONNECTION CONTROLLER
S14
END

Fig. 6


501
502
112
PROTOCOL CONTROLLER
COMMAND CONTROLLER
113
101
RESOURCE MANAGER
LABEL DATABASE
PORT INFORMATION TABLE
103
102
104
104a
MPLS SWITCH CONTROLLER
106
MPLS SWITCH
105
105a
OPTICAL SWITCH CONTROLLER
111
OPTICAL SWITCH